Ref # 144

For information of Mr. Keen

659

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY

FOREST INSECT INVESTIGATIONS

MOUNTAIN PINE BEETLE INFESTATION SHOSHONE INDIAN RESERVATION WYOMING

by
James C. Evenden
Entomologist

Forest Insect Laboratory
Coeur d'Alene, Idaho
November 15, 1935

U. S. GOVERNMENT PRINTING OFFICE: 1928 J 76133

MOUNTAIN PINE BEETLE INFESTATION
SHOSHONE INDIAN RESERVATION
WYOMING

During early August, 1935, this office was asked to pass upon the advisability of instituting control measures against an outbreak of the mountain pine beetle (Dendroctonus monticolae) in the pine stands of the Shoshone Indian Reservation, Wyoming. Though, in view of our knowledge of conditions within adjacent areas, the institution of such a project did not appear feasible, arrangements were made to visit the area to secure more definite data relative to the possibility. During early September two days were spent with Mr. Davis, Reservation Forester, in making an inspection of the infested area.

On September 4th, an inspection was made of a heavily infested area located on the head of Meadow Creek, T3N, R5W. The timber lies between an elevation of 6,500 and 8,500 feet and consists of Douglas fir at the lower elevations, which soon gives way to whitebark pine and a few spruce. There are scattered blocks of lodgepole pine distributed throughout the area, the location of which seems to be governed less by elevation than by other environmental factors. Whitebark pine occurs in rather large blocks, with a few open parks of varying acreages. The trees vary from 4 to 16 inches in diameter, and the stand is an exceptionally heavy stocking.

In all whitebark pine stands there are spots of infestation to be seen which vary from a few red-tops (1934 attacks) to solid blocks

of discolored foliage, varying from a few to many acres. One solid block of infestation was examined which contained some 2,000 acres, on which practically the entire whitebark pine stand had been killed. It was estimated that the loss up to and including the 1934 attack had taken approximately 60% of the stand, and that the 1935 attack included practically every remaining tree. The 1935 attacks and resulting broods were normally heavy, and unless some climatical factor intervenes, there will be a tremendous increase in the insect population in 1936. Though this block was perhaps the heaviest spot of infestation within this general area, there are groups of red-tops to be seen in all whitebark pine stands, with the 1935 attacks spreading into green stands where no previous attacks have occurred. Though the lodgepole stands have not been seriously infested, there are a few spots of red-tops to be seen, with a number of 1935 attacks unassociated with red-tops. Though no attempt was made to determine the extent of this outbreak, Mr. Lewis stated that the infestation extended southward for some few miles from the area examined, and northwestward to the eastern boundary of the Absaroka National Forest. Regardless of this information, when infestations of this character are encountered, one may be sure that a tremendous acreage is involved and many thousands of trees infested.

Throughout the area examined there is evidence of old mountain pine beetle work, which occurred at least 20 years ago. There is no

connection between this old work and the present epidemic which, as near as could be determined, started with a light infestation in 1932. The source of this infestation is, of course, unknown; however, it is not believed to have developed from existing local conditions.

On the morning of Sept. 5th a trip was made to the St. Lawrence Basin, some 12 or 13 miles south of the heavily infested Meadow Creek drainage examined the previous day. The timber in this basin is mostly lodgepole pine with no evidence of serious insect damage. A few distant red-tops were observed but were not examined, so it is possible that the trees could have been killed by some other agency, possibly porcupines. Very little whitebark pine was observed in this area, though it undoubtedly exists at higher elevations. A few trees of this species were recorded which had been heavily attacked during the present season, indicating the continued southern spread of the severe infestation to the north.

In discussing this situation with Forest Ranger Clayton at Dubois, Wyo., I was advised that there are continuous spots of infestation in that portion of the Teshekie National Forest lying along the east side of the Continental Divide and adjacent to the reservation. Blocks of heavy infestation on the Red Creek and Dinwoody drainages can be seen from the highway. There are also severe outbreaks of this insect in the northern portion of the Teshekie Forest and within the whitebark pine stand of the Shoshone Forest adjacent. Control measures have been instituted in some of the infested areas

within the Nezhakie Forest. In view of these facts it would seem that the mountain pine beetle infestation within the reservation is but a part of a general infestation present throughout this immediate region, and could not be regarded as an "infestation unit" on which control could be instituted with any assurance of success. Though the treatment of the infested trees within the boundaries of the reservation would have the immediate effect of eliminating further damage from the existing infestation, no assurance could be offered that the treated areas would not be reinfested from the many untreated areas adjacent. In view of the entomological unsoundness of such a project, the rough and inaccessible terrain to be covered, the low timber values at stake, as well as the large expenditure of public funds which would be involved, control measures are not recommended.

If there are points in this memorandum which are not fully understood, the writer will be pleased to offer further explanations.

Respectfully submitted,

James C. Evenden
Entomologist